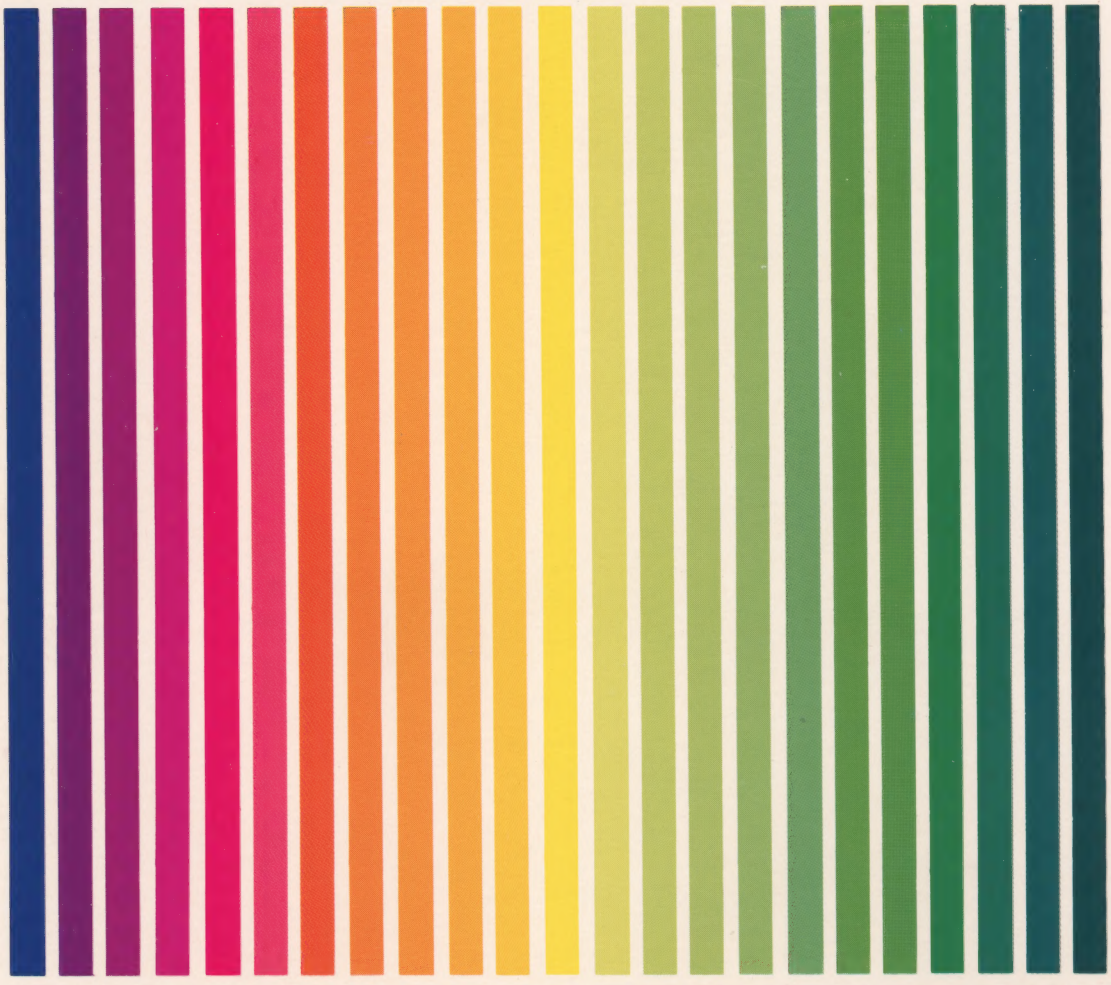
APX ATARI® PROGRAM EXCHANGE



Lane Winner

# VARIABLE CHANGER

APX-20012

User-Written Software for ATARI Home Computers

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by

Lane Winner

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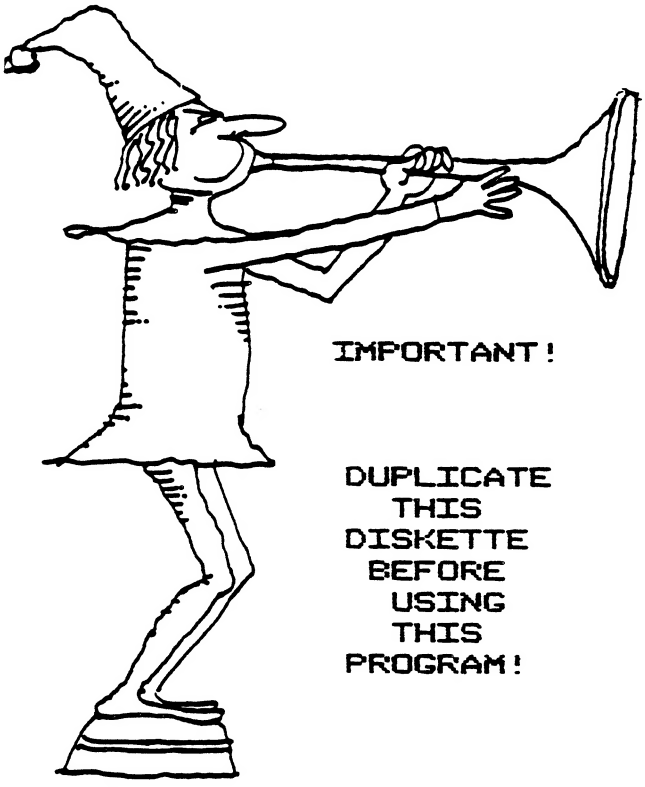


This APX diskette is unnotched to protect the software against accidental erasure. However, this protection also prevents a program from storing information on the diskette. The program you've purchased involves storing information. Therefore, before you can use the program, you must duplicate the contents of the diskette onto a notched diskette that doesn't have a write-protect tab covering the notch.

To duplicate the diskette, call the Disk Operating System (DOS) menu and select option J, Duplicate Disk. You can use this option with a single disk drive by manually swapping source (the APX diskette) and destination (a notched diskette) until the duplication process is complete. You can also use this option with multiple disk drive systems by inserting source and destination diskettes in two separate drives and letting the duplication process proceed automatically. (Note. This option copies sector by sector. Therefore, when the duplication is complete, any files previously stored on the destination diskette will have been destroyed.)

# CONTENTS

# INTRODUCTION

## OVERVIEW

[Scene 1.] Let's see...I'll name this variable A, and this variable B, and this one C, and this one....

[An hour later.] Hmmmm. Guess I'd better start back at A--I'll assign this variable AA and the next one BB, and the next one CC....

[Scene 2. Four months later]. I guess I'll make that little revision to my program while the kids are off my system! Let's see...oh yeah, variable A stood for my first counter, and B for....

[Two hours later.] Jeeeeez! These variables are driving me nuts! Why oh why didn't I assign them meaningful names? What I wouldn't give for a quick way to rename these gutless letters!

Relax. VARIABLE CHANGER is a painless way to repair the damage. In fact, this menu-driven program solves a number of potential problems involving variables. It can change a variable's name throughout your BASIC program by modifying your prgram's internal symbol table. You can either change selected variable names, or you can tell VARIABLE CHANGER to change all your variables to the shortest possible length. This latter option helps you when you need to compress a program into less space.

VARIABLE CHANGER can also help prevent your program from being pirated. It can convert all your variable names to the same non-printing character. Because the BASIC interpreter has already translated your variable names to an internal form, your program will still run, but no one will be able to understand it by using the LIST command, and so another user would have difficulty trying to modify your program.

## REQUIRED ACCESSORIES

24K RAM
ATARI BASIC Language Cartridge
ATARI 810 Disk Drive

# GETTING STARTED

1. Insert the ATARI BASIC Language Cartridge in the (Left Cartridge) slot of your computer.

2. Turn on your disk drive and insert the VARIABLE CHANGER diskette.

3. Power up your computer and turn on your video screen.

4. When the READY prompt displays, type RUN "D:VARCNR.APX" and press the RETURN key. The program will load into RAM and start.

NOTE. VARIABLE CHANGER requires that you store your file in SAVE format rather than in LIST format. If you've stored your file in LIST format, load it into RAM and then store it back to disk via the SAVE D:filename command.

# USING THE PROGRAM

## ENTERING INPUT AND OUTPUT FILE NAMES

After the COPYRIGHT 1981 ATARI notice displays, you see the prompt

```
ENTER INPUT FILENAME:
```

Enter the device code and file name of the program you want VARIABLE CHANGER to work on and press the RETURN key (e.g., D:ACCOUNT for a file on disk drive one, or D2:CHECKS for a file on disk drive two).

Then VARIABLE CHANGER asks you to indicate where you want to store your file after you've modified it. The prompt is:

```
ENTER OUTPUT FILENAME:
```

Enter the device code and file name in the same format you used for your input file. If you store your output file back on the same diskette, be sure to assign it a different name or you'll erase your original file. (To request a printout, type P: in response to the prompt; to display it on your video screen, type E: in response to the prompt; and to store it on cassette, type C: in response to the prompt.)

VARIABLE CHANGER then displays the Main Menu for you to select the function(s) you want to perform.

## MAIN MENU

The Main Menu looks like this:

```
OPTIONS ARE:

   1) NUMBER OF VARIABLES AND NAMES

   2) CHANGE A VARIABLE NAME

   3) CHANGE ALL VARIABLE NAMES

   4) GENERATE TWO CHARACTER NAMES

   5) GENERATE ONE CHARACTER NAMES

   6) ALL NAMES THE SAME CHARACTER

   7) CLOSE FILES AND EXIT

SELECT OPTION:
```

Figure 1. Main Menu

Choose a menu selection by entering its corresponding number and pressing the RETURN key (e.g., type 2 + RETURN if you want to change a variable name).

1) NUMBER OF VARIABLES AND NAMES

Use this selection to display a list of all the variables in the internal symbol table and the number of variables in the table. The format is:

```
TD
ERR
A
OLDS
 :
31 VARIABLES FOUND

HIT RETURN
```

Remember that VARIABLE CHANGER looks at your program's internal symbol table and not at your program. Thus, the list might contain variables no longer active in your program but still in the table. To delete such variables, store the program in LIST format on diskette, type NEW (to erase the current symbol table), load your program back into RAM via the ENTER command, and then store it back on diskette in SAVE format (which causes the system to write a new table). For more information about this procedure, see the sections on LOAD, SAVE, LIST, and ENTER in the Disk Operating System Reference Manual.

Press the RETURN key to return to the Main Menu.

2) CHANGE A VARIABLE NAME

Use this selection to rename one variable. A prompt asks for the current name of the variable:

```
OLD VARIABLE NAME:
```

Enter the current name (e.g., COUNTER1). A second prompt asks for the new name you want to assign this variable:

```
NEW VARIABLE NAME:
```

Enter the new name (e.g., CTR1). VARIABLE CHANGER then renames this variable throughout your program. Press the RETURN key to return to the Main Menu.

3) CHANGE ALL VARIABLE NAMES

Use this selection to rename every variable in your program, one at a time. VARIABLE CHANGER displays each current name, and prompts you for the new name you wish to assign to this variable. If you press the RETURN key without enterng a new name, that name remains unchanged, and VARIABLE CHANGER prompts you for the next variable. For example to rename variables A and C, but leave variable BANK alone, the sequence would be as follows:

```
OLD VARIABLE NAME: A
NEW VARIABLE NAME: ACCOUNT

OLD VARIABLE NAME: BANK
NEW VARIABLE NAME: <RETURN>

OLD VARIABLE NAME: C
NEW VARIABLE NAME: CHARGE

   :

HIT RETURN
```

Press the RETURN key to return to the Main Menu.

4) GENERATE TWO CHARACTER NAMES

Use this selection to tell VARIABLE CHANGER to assign two-character names to all your variables automatically. It assigns names starting with AA and proceeding sequentially to DX. This menu selection has no prompts. While VARIABLE CHANGER is reassigning names, the message COMPACTING displays on your video screen. When the HIT RETURN prompt displays, press the RETURN key to return to the Main Menu.

5) GENERATE ONE CHARACTER NAMES

Use this selection to tell VARIABLE CHANGER to assign one-character names to all your variables automatically. It assigns names in order of the ATASCII Character Set (see

Appendix C of the BASIC Reference Manual for a list of these characters). This menu selection has no prompts. While VARIABLE CHANGER is reassigning names, the message COMPACTING displays on your video screen. When the HIT RETURN prompt displays, press the RETURN key to return to the Main Menu.

6) ALL NAMES THE SAME CHARACTER

Use this selection to rename all your variables to the same character. Once you use this option, reading your code will be extremely difficult, so don't do it until your program is in final form. (Of course, should you need to revise your program later, you can always use the original file instead of the file you reworked with VARIABLE CHANGER.) A prompts asks you for the ATASCII number of the character you want as your universal name:

```
ATASCII NUMBER OF CHARACTER:
```

Enter any ATASCII number (e.g., 32 for "blank" or 65 for "A") and press the RETURN key. While VARIABLE CHANGER is renaming your variables, the message COMPACTING displays on your video screen. When the HIT RETURN prompt displays, press the RETURN key to return to the Main Menu. From then on, all your variables will appear as that character when listed.

7) CLOSE FILES AND EXIT

Use this selection to end your session with VARIABLE CHANGER. The message PLEASE WAIT FOR READY MESSAGE displays while VARIABLE CHANGER stores your reworked program in SAVE format under the file name you specified when you began the session. Then the READY prompt displays, returning you to BASIC.

# TROUBLESHOOTING

## PROGRAM OPERATION LIMITATIONS AND WARNINGS

If you lengthen your variable names, you could cause a line to exceed the logical line limit of the Screen Editor. The program will still run, but you won't be able to edit these lines in the future because the Screen Editor will truncate them. Therefore, it's a good idea to look over lines containing any variables you intend to lengthen before doing so.

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# ATARI PROGRAM EXCHANGE

REVIEW FORM

We're interested in your experiences with APX programs and documentation, both favorable and unfavorable. Many software authors are willing and eager to improve their programs if they know what users want. And, of course, we want to know about any bugs that slipped by us, so that the software author can fix them. We also want to know whether our documentation is meeting your needs. You are our best source for suggesting improvements! Please help us by taking a moment to fill in this review sheet. Fold the sheet in thirds and seal it so that the address on the bottom of the back becomes the envelope front. Thank you for helping us!

1. Name and APX number of program _____

2. If you have problems using the program, please describe them here.

_____

_____

_____

3. What do you especially like about this program?

_____

_____

_____

4. What do you think the program's weaknesses are?

_____

_____

_____

5. How can the catalog description be more accurate and/or comprehensive?

_____

_____

6. On a scale of 1 to 10, 1 being "poor" and 10 being "excellent", please rate the following aspects of this program?

_____ Easy to use
_____ User-oriented (e.g., menus, prompts, clear language)
_____ Enjoyable
_____ Self-instructive
_____ Useful (non-game software)
_____ Imaginative graphics and sound

7. Describe any technical errors you found in the user instructions (please give page numbers).

8. What did you especially like about the user instructions?

9. What revisions or additions would improve these instructions?

10. On a scale of 1 to 10, 1 representing "poor" and 10 representing "excellent", how would you rate the user instructions and why?

11. Other comments about the software or user instructions:

| |
|---|
| STAMP |

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[seal here]